

CLAIMS

What is claimed is:

1. An apparatus comprising:

a support member configured for support by one of a support surface and a support structure;

a moveable member connected to said support member to be movable relative to said support member between a first position and a second position;

a user support mechanically associated with said moveable member, said user support being configured to support at least one user positioned thereon, said user support being configured and positioned on said moveable member for the user to apply a selected force to one of said moveable member, said support surface, said support structure and said support member to urge said moveable member between said first position and said second position; and

a sound producing mechanism connected to one of said user support, said support member, and said moveable member to produce sound as said moveable member moves between said first position and said second position.

2. The apparatus of claim 1, wherein said sound producing mechanism includes:

a struck member configured to generate sound upon being struck, and

a striking member associated with said moveable member and positioned to strike said struck member upon movement of said moveable member between said first position and said second position.

3. The apparatus of claim 2 wherein said sound producing mechanism includes at least one surface for movement of a striking member thereon, wherein said struck member is positioned to

be struck by said striking member moving on said at least one surface as said moveable member moves between said first position and said second position.

4. The apparatus of claim 3 further including a plurality of struck members each selected to produce a sound of a preselected frequency.

5. The apparatus of claim 4 wherein said plurality of struck members produce a plurality of sounds in one of a harmony and a melody.

6. The apparatus of claim 1, wherein said sound producing mechanism includes:
an air operated sound generator attached to said moveable member and configured to produce sound as air passes therethrough, upon movement of said moveable member between said first position and said second position.

7. The apparatus of claim 2, wherein said moveable member is a see-saw beam having a first end and a second end spaced apart from said first end, said see-saw beam being positioned on said support member at a pivot point between said first end and said second end, and

wherein said user support includes a first user seat proximate the first end of said see-saw beam for a first user and a second user seat proximate the second end of said see-saw beam for a second user, said first user seat and said second user seat each being positioned on said see-saw beam for said first user and said second user to each selectively apply a force to said support surface to urge said see-saw beam in pivoting movement around said pivot point between said first position and said second position.

8. The apparatus of claim 2, wherein said striking member is at least one moveable object positioned to contact said struck member to cause sound to be generated as said moveable member moves in response to force applied by said user.

9. The apparatus of claim 8 wherein said struck member is a sound board.
10. The apparatus of claim 8 wherein said struck member is a container.
11. The apparatus of claim 9 wherein said struck member is a bell.
12. The apparatus of claim 10 wherein said container includes walls that form at least one chamber and wherein said at least one movable object is positioned within said chamber.
13. The apparatus of claim 12 wherein said chamber has at least one surface upon which said moveable object moves.
14. The apparatus of claim 13 wherein said at least one surface has a plurality of projecting elements attached to said at least one surface configured to vibrate and generate audible sound when struck by said moveable object, each of said projecting elements being positioned to be contacted by said moveable object as it moves.
15. The apparatus of claim 14 wherein said striking member is a plurality of movable objects.
16. The apparatus of claim 15, wherein said projecting elements are positioned in a selected configuration and sized to generate audible sounds selected to produce a selected frequency pattern.
17. The apparatus of claim 15 wherein said projecting elements are in a selected configuration and sized to generate at least a portion of a known melody.
18. The apparatus of claim 14, wherein said projecting elements are solid metal bars.
19. The apparatus of claim 14, wherein said projecting elements are hollow tubes.
20. The apparatus of claim 14, wherein said projecting elements include bells.
21. The apparatus of claim 14, wherein said sound generating mechanism includes a resonator, which amplifies the sound produced when said projecting elements are contacted by said moveable objects.

22. The apparatus of claim 7, wherein said see-saw beam has a selected length and wherein said struck member is an elongated closed container, said elongated closed container being connected to said see-saw beam to extend along a portion of said length, said container forming at least one interior chamber, wherein said striking member is a plurality of objects at least a portion of which change location within said container and make an audible sound when said see-saw beam is moved in a pivoting movement by said first user and second user.
23. The apparatus of claim 22, wherein said objects are spherical in shape.
24. The apparatus of claim 22, wherein said objects are marbles.
25. The apparatus of claim 22, wherein said objects are plastic balls.
26. The apparatus of claim 22, wherein said objects are metal pellets.
27. The apparatus of claim 22, further including a plurality of projecting elements each attached at a first end to said container to extend to a second end in the interior of said container, said projecting elements each being sized and positioned to be contacted by at least one of said moveable objects and to thereupon generate an audible sound.
28. The apparatus of claim 27 wherein said projecting elements are positioned in a selected configuration and sized to generate audible sounds selected to produce a desired frequency pattern.
29. The apparatus of claim 22, wherein at least a portion of the walls of said container is formed of a transparent material oriented for a user to view at least one moveable object as it moves within said chamber.
30. The apparatus of claim 7, further comprising a damping means for damping the pivoting movement of said see-saw beam.

31. The apparatus of claim 30, wherein said damping means includes an extension spring connected at one end to said see-saw beam and at a second end to said support member, said extension spring being positioned and sized to restrict the pivoting movement of said see-saw beam.
32. The apparatus of claim 31, wherein said damping means includes a shock absorber connected at one end to said see-saw beam and at a second end to said support member, and wherein said shock absorber resists the pivoting movement of said see-saw beam.
33. The apparatus of claim 1, wherein said support member includes a swing pivot, wherein said moveable member is a swing mechanism extending from said swing pivot and moveable between said first position and said second position, wherein said user support is a swing seat and wherein said sound producing mechanism is positioned proximate said swing pivot to be activated as said swing mechanism moves between said first position and said second position.
34. The apparatus of claim 33 wherein said swing mechanism is a see saw.
35. The apparatus of claim 1 wherein said user support is a user seat, wherein said moveable member includes a spring mounted at one end to said support member and connected at the other end to said user seat, whereby said force is applied by said user orienting the user's body to move its center of gravity to urge said user support to move relative to said support member, and wherein said sound producing mechanism is positioned proximate said user support to produce sound upon movement of said user support.
36. The apparatus of claim 35 wherein said sound producing mechanism includes a closed container connected to said user support, said container including a plurality of moveable objects that change position within the container as said user urges said user support to move relative to

said support member, the movement of said moveable objects producing sound audible to said user.

37. The apparatus of claim 35 wherein said sound producing mechanism is at least one bell, which produces sound as the user support is urged by the user to move relative to the support member.

38. The apparatus of claim 35 wherein said sound producing mechanism includes a striking member connected to said user support, which contacts a struck member positioned proximate to said striking member when said user urges said user support to move relative to said support member, the contact of said striking member with said struck member producing a sound audible to said user.

39. The apparatus of claim 2 wherein said moveable member is also said struck member.

40. The apparatus of claim 39 wherein said moveable member is a flexible substrate connected at one end to said support member, and at a second end to said user support, and wherein said sound producing mechanism includes mallet-like structures attached at the second end of said substrate oriented to strike said substrate when said user applies force to said mallet-like structures to generate sound audible to said user.

41. The apparatus of claim 40 wherein said user support includes a user seat connected to said substrate, said user seat being positioned such that the movement of the user seated in said user seat to change his center of gravity applies force to urge the substrate to move from a first position to a second position relative to said support member, and thereby also changes the pitch of the sound generated by the striking of said substrate with said mallet-like structures.

42. The apparatus of claim 1, wherein said user support includes a platform having a top side and an under side, the platform configured to support at least one user standing on said top side,

wherein a handle is mounted on the top side of said platform and extends above the platform, for said at least one user to hold, and wherein said moveable member is a spring attached at one end to said support member and at said second end to the under side of said platform, wherein the sound-producing mechanism is activated by movement of said platform in a selected way, and the user standing on said platform and holding the handle applying force to move said platform in said selected way, so causing the sound producing mechanism to produce sound as the user moves said platform.

43. The apparatus of claim 42 wherein a pole is mounted on the top side of said platform, and the handle is attached to said pole, and wherein said sound producing mechanism includes a plurality of tines suspended by a frame positioned on a second support member above the platform, and wherein a mallet-like element is attached to the top end of said pole, the user standing on said platform and holding the handle connected to said pole applying force to move said platform and said pole, so urging said mallet-like element to strike said tines, producing a sound audible to said user.

44. The apparatus of claim 5 wherein said support member is a frame, said moveable member being a swing mechanism suspended from said frame, the swing mechanism including a user seat, and the sound producing mechanism being positioned on said swing mechanism, the user seated in the user seat applying force to move said swing mechanism and to cause said air operated sound generator to produce sound.